Need for the Project

Overview of Vermont's Current Longitudinal Data System
For the past ten years, the Vermont Department of Education (VT DOE) has dedicated its data efforts toward implementing a statewide student identifier, meeting vastly expanding statutory reporting requirements, and building a data warehouse to provide longitudinal data to its educational community. In 1998 VT DOE implemented a statewide student identifier which now exists in all student-level datasets across the department. The student identifier initially provided student demographic and program participation information. In 2004 our student-level data systems were dramatically expanded to meet the requirements of the No Child Left Behind Act (NCLB). The expansion of the student census allowed tracking of P-12 mobile students and verification of student transfers and dropouts. Also in response to NCLB requirements, Vermont implemented a unique teacher identifier, and an incident level discipline data system.

Shortly thereafter, VT DOE created an Education Data Warehouse (EDW) in collaboration with a consortium of local school districts called the Vermont Data Consortium (VDC). The VDC represents about half of Vermont school districts. The member districts pay consortium dues providing the benefit of loading local data into the district model of the EDW. All districts have access to the state model storing data collected by the state from schools and districts. The EDW contains student, program, teacher, discipline, assessment, and school finance data. Depending on the data, the EDW in the state model contains between six to 13 years of longitudinal data.

There are two important distinctions between the state and district model of the EDW. The state model does not allow the link between teachers and students. The district model allows for this linkage and member districts can upload local assessment data. The population of the district model is available only to VDC members and is entirely optional. Only 13 of the 31 VDC members have loaded local data into the district side of the model.

The new data reporting requirements and implementation of the EDW proved challenging for both the state and local districts. Most local districts lack the financial, technical and human resources necessary to accumulate, clean, report and analyze data. In an attempt to improve data quality and reduce local burden, VT DOE hired a consulting firm (through a National Center for Education Statistics (NCES) cooperative system grant) to conduct site visits and create a best practices guide for meeting core data reporting requirements. Technological barriers documented during the site visits include too few computers, out-of-date computers, no wide area network, and a lack of technology staff (or staff working on contract). A major finding was that, even in districts with no technological barriers, the staff expected to complete data requests lack the time and tools to meet the requirements efficiently. Technical staff members are typically unavailable because of competing needs and the opinion that data reporting is largely a data entry task. Data reporting is a tremendous burden on schools; some school secretaries have to complete the task "gratis" nights, weekends, and after the school year end.

Another surprising finding in Vermont, which is a strong local control state, was that superintendents were open to or even expected the state to provide a single student information solution. It is important to note, this sentiment expressed by a few superintendents five years ago is currently unanimously held throughout the Vermont Superintendents Association.

The dual data model of the EDW seemed an ideal solution over and above creating more data reporting requirements for local districts to allow linking between student data with teacher data and all the rich analysis that linkage allows. Unfortunately, the implementation of the district side of the model has progressed slowly. As mentioned above, fewer than one third of Vermont districts have taken advantage of the EDW to link students and teachers to the wealth of performance, program participation and demographic information included in the EDW. Other schools either rely on their local data system or lack the ability to access and analyze linked student/teacher data. Even those districts successful in loading their data into the EDW have difficulty using their data for a number of reasons. Two major issues are the following:

- The local data tends to have many errors in student identifiers. The accuracy of the student identifiers is essential to linking between local and state data and looking at student achievement longitudinally.
- The EDW ad hoc query tool and the extensiveness of the EDW data model prove difficult for most EDW users except those with additional data analysis training. Even districts employing data analysts trained to use the ad hoc query tool do not take advantage of this resource because administrators unaccustomed to using data for decision making do not provide these analysts with questions that can be answered using longitudinal data.

To respond to the difficulties using the ad hoc query tool and to make education information more accessible, VT DOE gained an NCES cooperative system grant to create a data-driven reporting system. We sought to expand and enhance the data warehouse reporting capabilities by developing a series of new report "templates." These report templates are used to create new reports that can be available to both internal users and the general public via the VT DOE web site. The templates can also be used to clone future reports using the same report design but accessing different aggregated source data.

Once developed or cloned, the report file is published to the report server which then renders the reports on demand for the end-users in HTML when the report is accessed through an URL. The reports draw data from a set of custom tables in the EDW.

The design approach is "database-centric" in that the report definition elements are contained in the report database. Very minimal configuration needs to be done with the report development tool when cloning report templates. One of the guiding principles for this project was to minimize the amount of complex, custom coding for the report templates.

Reports are parameter-driven to focus the report data, typically for a particular school and/or time period. Most reports have dynamic links to automatically change the displayed report statistic (i.e. switch from showing breakdown by race to breakdown by poverty level), as well as offering direct linking to other reports where the linked report parameters are automatically picked up from the linking report. All reports have help pages set up to provide documentation and definitions for the report viewers. One result of this project is that VT DOE is perfectly poised to quickly create data reports cloned from existing report templates and driven through a report database in the EDW.

Vermont's Current Data System Status and Needs According to the 12 Essential Elements

Vermont has made tremendous gains in developing a longitudinal data system with an agile reporting tool. This grant will provide us with the opportunity to expand our existing system, provide easy access to the information contained in the system, and further analyze education data to inform policy and enhance instructional practices. This planned expansion will be available to all education stakeholders and not limited by VDC membership.

Vermont's important strides over the past ten years, attest to VT DOE's commitment to building a robust and valuable longitudinal data system. We recognize that there are still some key gaps, which we haven't been able to address due to funding and personnel shortages. Local choices and priorities have also resulted in inequitable educator access to high quality information and system tools to inform instruction. The Vermont Data Enhancement Project (V-DEP) will enable us to target those areas, and create the data system we envision, markedly increasing our ability to use data to measure and improve outcomes for all children in Vermont. In addition, we are coordinating this project with other ARRA grant opportunities. Specifically we are seeking funds to implement a Single Statewide Education Portal (Race to the Top) which will aggregate high quality information and systems resources for educators, parents, students and other stakeholders. We are also planning on using the School Improvement Grant administration funds to implement a Curriculum Managements System which will enable educators to develop and share high quality curriculum and align it to standards.

V-DEP will ensure that Vermont meets all seven capabilities and 12 required data elements required by this grant. At the same time, Vermont is committed to meeting these requirements in a manner that minimizes the burden on local schools and districts to enable educators to focus on instruction. For this reason, we are proposing a statewide student information toolset using a school interoperability framework (SIF) to automate the transfer of data between schools and the state. See Appendix C for a summary.

Following is an explanation of Vermont's current data system status organized by the required capabilities and elements (the capabilities and elements are listed in summary form).

C1. Examine student progress and outcomes over time…[and] include data at the individual student level from preschool through postsecondary education and into the workforce. Status: *Requirement Under Development*
Vermont has invested nearly $1.5 million in a longitudinal data warehouse. The EDW currently houses P-12 student level information including enrollment, demographics, program participation, and achievement. The EDW includes an ad hoc query tool but most users find this tool and the extensive data model too difficult to use for even the most routine data analysis. With a National Center for Education Statistics (NCES) cooperative system grant and state funds, Vermont has developed a number of "point and click" report templates to present multiple education indicators from the EDW over time at the school, district, supervisory union, and state level. These reports make education information easily accessible to all stakeholders, including educators, parents and the public. One priority of this project is to develop more reports and enhance existing reports to expand the available information beyond P-12.
Identified Need: In order to examine student performance from preschool to postsecondary efforts, VT DOE needs a comprehensive set of P-12, post-secondary and workforce information. Further, this information needs to be easily available to education stakeholders. We will expand

EDW data objects to include preschool assessments, SAT scores, advanced placement course taking, college enrollment and workforce information. In addition, we intend to expand EDW reports in order to improve access to information identified in this area. These reports will provide local high schools with information on how well they prepare their students for college and careers and will help inform policy related to reforming secondary education in Vermont.

C2.   Facilitate and enable the exchange of data among agencies and institutions within the State and between States so that data may be used to inform policy and practice… Support interoperability…to ensure linkage and connectivity among the various levels and types of data. Status: *Requirement Under Development*
Vermont DOE currently shares a number of datasets with the Agency of Health and Human Services (AHS). The shared data includes weekly updates on students in state custody, monthly updates on students in families receiving food stamps, annual analysis of performance outcomes on students in state custody, annual performance analysis on students receiving mental health services and homeless students, and Medicaid information. This sharing of information serves many purposes: data regarding students in state custody impacts the state education fund, food stamps information helps ensure that students receive their subsidized meals benefits and other analyses inform policy around supporting students at the greatest risk of academic failure. Typically, student level data are given to the VT DOE and aggregate data is returned to AHS. With two exceptions, there is no automated flow of information between VT DOE and schools. These two exceptions include sharing Youth Risk Behavior Survey data from AHS with local school districts through our EDW. Relevant staff members of AHS and local school districts have access to the EDW for analysis and reporting of these important data. Secondly, VT DOE also shares information from AHS with schools regarding Vermont students eligible for meal benefits.
Identified Need: Vermont is currently engaged in an initiative to transform its educational system. Two key components of this transformation are engaging community partners and sharing results and indicators of a successful transformation. Consistent with the goals of this initiative, VT DOE is committed to a research agenda that promotes data exchange between institutions and other agencies. VT DOE will access student-level program participation data from AHS and load these data into the EDW. Role-appropriate access to education indicators by program area will be allowed for AHS staff. VT DOE will also receive data from the VT Department of Labor, including wage earnings information. Vermont State Colleges has agreed to provide course-taking (including remedial courses) information to VT DOE. As a participant in NESSC we have agreed to develop a standard New England data ask to receive from National Student Clearinghouse data capturing other college enrollment information. We will continue to receive student-level data from the College Board. We will expand EDW data objects and reports to include this information. A priority of our research advisory council is to define the best approach for sharing this newly available information among agencies, institutions and researchers to best inform education policy and improve essential services for Vermont citizens.

C3.   Link student data with teachers, i.e…so that a given student may be matched with particular teachers primarily responsible for providing instruction in various subjects. Status: *Requirement Under Development.*
Vermont assigns educators, candidates for educator licensing and graduates of Vermont educator preparation programs a unique educator identifier. Vermont conducts an annual census of

educators by employing district; this census links educators to the schools they serve and the courses they teach. This educator census provides the information for our Highly Qualified Teacher analysis. The educator census and certification information is available through the EDW. Local districts are able to link students and teachers through their own data systems or using the district model of the EDW. Vermont DOE does not currently have the capacity to link student, course and teacher information.

This sort of linked data can be very useful for identifying which teachers have the greatest impact on student achievement in select courses. For instance, a teacher may want to know how a particular student performed on the math assessment after spending a year in the classroom with this teacher. These data can also be viewed in aggregate by school administrators to identify highly effective teachers or those in need of professional development. Only when teachers and students are linked together can these sorts of analysis take place.

Identified Need: VT DOE intends to collect information that allows student/course/teacher linkages from all school districts. In order to collect this information without increasing the data reporting burden on local districts, we intend to implement a statewide student information system (including course scheduling) with SIF vertical reporting to allow real-time data in a state level operational data store. This data reporting will be mandatory for districts. These data will be loaded into the EDW in a timely manner and available to teachers and administrators as well as VT DOE analysts and research partners. Research goals include confirming the equitable distribution of highly qualified teacher in schools with the highest poverty to assist in closing the achievement gap in those schools. We will further use the information to evaluate individual teacher impact on student achievement.

C4. The system must enable the matching of teachers with information about their certification and teacher preparation programs, including the institutions at which teachers received their training. Status: *Work Completed Enhanced Capability planned*
Vermont collects information regarding in-state educator preparation programs and program graduates. In addition, Vermont has paper files, including the location of the preparation program or if the teacher achieved credentialing through out-of-state or alternative pathways. Information about educator preparation is not currently readily available to stakeholders.
Identified Need: In order to maximize our state's resources and to enable greater quality, comparability, and portability of training and licensure throughout the New England region, VT DOE has embarked on a collaborative effort with the five other New England states (Maine, New Hampshire, Rhode Island, Massachusetts, and Connecticut). This new effort is called the New England Collaborative for Educator Quality and Effectiveness and is designed to enable each state to improve and coordinate its educator recruitment, preparation, licensing, induction and mentoring, evaluation, professional development, and career development processes. Facilitation is provided by the New England Comprehensive Center (NECC). The New England Regional Education Laboratory (NE-REL) and National Comprehensive Center for Teacher Quality (NCCTQ) provide research support. This work will be funded by Vermont and is not a part of this grant opportunity.

C5. Enable data to be easily generated for continuous improvement and decision-making, including timely reporting to parents, teachers, and school leaders on the achievement of their students. Status: *Requirement Under Development*

Vermont's EDW has been available to state and local users for over five years. Time has proven that the EDW ad hoc query tool is highly functional but challenging for the casual user of the EDW. Some of the difficulty of using the EDW in support of data-driven decision making is the extensiveness of our data model which will just grow as we add new data objects. In an effort to simplify data use from the EDW Vermont has created a number of point and click reports of education indicators available at the school, district, supervisory union, and state levels. These indicators include student demographic breakouts, student information such as attendance rate and graduation rate, and school information such as average teacher salary and percentage of teachers on emergency licenses. In addition, Vermont intends to upgrade our EDW and one of the new features of the upgrade is a district level performance dashboard with student level drill-down capabilities. However, facilitating the use of the EDW does not address the need for timely data reporting. Currently the data in the EDW are refreshed twice per year. This load cycle is insufficient for supporting continuous improvement.

Identified Need: Vermont intends to implement a statewide student information system with SIF vertical reporting. The state will maintain an operational data store that receives real-time information from district information systems. These data will be regularly loaded into the EDW increasing the timeliness of the data available from the EDW and the reports system. Further, a required feature of the system is a portal where students, parents, educators and school leaders can access student information.

C6.   Ensure the quality and integrity of data contained in the system. Status: *Requirement Under Development*. Over the past six years Vermont DOE has extensively expanded its documentation and quality checks of all the core data requirements. Documentation includes a data dictionary, data classification, and business rules for assessing data quality. We have adopted standardized naming conventions and data types. We maintain business rules that validate data at the cell, row, table, and across table levels. These business rules will be included in the validity checks used by the SIF process. Vermont is in the process of documenting school and district data quality in terms of accuracy and timeliness. Our intention in this project is to identify districts that can benefit from targeted technical support in meeting their data reporting requirements.

Identified Need: Consistent with our current practice, VT DOE will fully document the data in the statewide student information toolset. This includes updating our existing data dictionary, classifying all data elements for confidentiality and constructing business rules to ensure the quality of the data transmitted to the state operational data store. As a part of this project, school staff members will receive training and ongoing support on using the statewide system.

C7.   Provide the State with the ability to meet reporting requirements of the Department, especially reporting progress on the metrics established for the State Fiscal Stabilization Fund and the reporting requirements in *EDFacts*. Status: *Requirement Under Development*
VT DOE employs three analysts who submit EDFacts files. Two of the analysts report all files related to children with disabilities, achievement data and accountability information. All other files are created by the EDFacts Coordinator using information from VT DOE data silos. While most of the data required by EDFacts is stored in the EDW, the EDW load cycle is bi-annual and does not allow the EDW to be used to meet our EDFacts reporting requirements. The process is inefficient because our EDFacts Coordinator must contact numerous program staff to gain access to their data and information transfer is often slow due to competing work demands.

Identified Need: VT DOE will be able to increase the EDW data load as we will receive real-time data rather than on a bi-annual data collection cycle. EDFacts data can then be extracted from the EDW, greatly facilitating EDFacts file submission. Incorporating the student/course/teacher link in the EDW will be essential to meeting State Fiscal Stabilization Fund requirements.

E1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system (except as allowed by Federal and State law). Status: *Work Completed*

VT DOE has maintained a unique longitudinal student identifier for public, independent and home study students since 1998. The identifier is not personally identifiable (not constructed from name, date of birth, or other demographic information). The master list of students with unique student identifier is stored on a protected network drive at VT DOE. The data steward for this data element is a business analyst on the IT Team. The matching algorithm which searches for exact and partial (potential) matches was developed internally and utilizes name, DOB, gender, other demographic information and Soundex to match to existing identifiers or return possible matches based on strength of match. Current policy allows only this data steward to identify unknown students or to assign new ids. Unknown students come into the department at several points during the year including the receipt of fall and spring student census data; the children with disabilities data collection; and data from program offices including migrant education, English Language Learners, technical center students and student level data received from other Vermont agencies.

E2. Student-level enrollment, demographic, and program participation information. Status: *Requirement Under Development*

P-12 student-level enrollment and demographic information is collected using the spring and fall student census. Program participation data is collected using separate data systems. All enrollment and demographic data are made available through the EDW. English Language Learners and migrant students are tagged for participating in their respective programs.

Identified Need: VT DOE must integrate post-secondary data from National Student Clearinghouse and add post-secondary indicators to school reports to clarify to stakeholders how well Vermont high schools prepare students for college.

E3. Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs. Status: *Requirement Under Development*. Vermont's student census is a collection of enrollment instances. In other words, if a single student exits a school mid-year and then re-enters the school before the end of the school year, that student would have two records of enrollment in the school's census. Each enrollment instance includes begin and end dates along with admission and exit codes. In this way, we are able to know when students exist, transfer in, transfer out, drop out or complete programs. We have access to this information for P-12 students enrolled in public schools. The census is currently collected both at the beginning and at the end of the school year. This method of collecting information allows us to meet our reporting requirements but limits our ability to use census data to potentially influence experience in school for that year. For instance, we currently collect aggregate attendance data at the end of the school year so we cannot use chronic

absences in a tool to identify students at risk of dropping out of school. In addition to the bi-annual data collection limitation, we do not have this information for post-secondary students. **Identified Need:** VT DOE is working collaboratively with NESSC and the National Student Clearinghouse (NSC) to access customized data extracts from NSC. We will obtain the NSC data and load it into our EDW to provide access to exit and transfer information for post-secondary students. VT DOE will expand the P-12 data elements received at the state level via the operational data store and the increased load frequency into the EDW will allow for reporting information that can influence instruction, including a student-level early warning report and college readiness report. Report data elements and contents will be identified in collaboration with NESSC, a research advisory board and Vermont colleges and university. These reports will allow high schools to better prepare students for college and identify those in need of extra support to keep them in school.

E4.   The capacity to communicate with higher education data systems. Status: *Requirement Under Development*. VT DOE currently can communicate with higher education data systems by receiving student names, dates of birth and gender. This communication has been limited to a few approved education research projects driven by the researcher and the needs of program offices. Vermont has committed to expand research into the post-secondary realm to include post-secondary enrollment, readiness and success.
Identified Need: Vermont, with our NESSC partners, is committed to creating and publishing currently unavailable indicators of college enrollment, readiness and success. To meet this commitment we will exchange data with higher education systems and make these data available to all education stakeholders through the EDW and EDW driven reports.

E5.   A State data audit system assessing data quality, validity, and reliability. Status: *Requirement Under Development*. Vermont has multiple ways of assessing data quality, validity and reliability utilizing best industry practices. We have fully documented our core data collections including data dictionary, business rules and data classification. Business rules for each data collection are implemented as data are received by VT DOE. We check data at the cell, row, table,and across table levels. Student data is checked for duplicate enrollment instances and disputed students (i.e., students enrolled at the same time in more than one school). The fall and spring Census are checked against each other to ensure that enrollment records do not get dropped over the course of a year. Most collections are compared to prior year data to look for reporting anomalies. VT DOE is now developing a school and supervisory union level report on the timeliness and accuracy of data submitted to the Department. The goal is to identify and work with schools in need of technical support to improve their data quality.
Identified Need: With regard to data quality and auditing, VT DOE intends to update its current practices appropriate to the newly implemented system. With a real-time student information system, the audit system will require substantial retooling. Business rules will be implemented at the district level and the state level (including those edits that can only be conducted with a statewide set of student records) and will ensure data quality.

E6.   Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965. Status: *Work Completed*. VT DOE has annual assessment records of individual students. These data are stored in the EDW and available through the ad hoc query tool or served up in a "point and click" report. Our

assessment report allows all education stakeholders, including parents and the public to see school, district, or state level assessment reports by subgroup, over time or across tests.

E7.   Information on students not tested, by grade and subject. Status: *Work Completed*. Vermont collects information on students not tested including the student's identity and the reason they were not tested.

E8.   A teacher identifier system with the ability to match teachers to students. Status: *Requirement Under Development*. Vermont conducts an annual educator census which includes the schools where teachers provides services and the courses they teach. These data are collected in support of our determination of Highly Qualified Teachers (HQT). At this time we do not require districts to submit data linking students to teachers or courses at the state level. The primary goal behind implementing the statewide student solution is to allow Vermont to capture the data that links teachers to students without creating an extra burden on schools.
Identified Need: VT DOE intends to mandate reporting of teacher/student/course information for all districts. We will facilitate reporting through a statewide student information system that is SIF certified, allowing automated data transfer. We will provide the data to districts through the EDW and develop EDW driven reports to support schools' work on student achievement.

E9.   Student-level transcript information, including information on courses completed and grades earned. Status: *Requirement Under Developmen*t. VT DOE does not currently collect transcript information, including courses and grades earned, nor do we have the capacity to collect these data with our current system. Many schools and districts in Vermont are unable to share transcript information either between schools or with VT DOE. Facilitating the transfer of transcript information between schools will ensure that a newly enrolling school has the proper information to provide instructional services to individual students.
Identified Need: Vermont's implementation of a statewide student information system with SIF integrated state operational data store will enable the automated collection of student level transcript information. In addition, our NESSC partners are piloting an electronic transcript exchange with regional colleges and universities. Vermont is not currently in a position to participate in this pilot. However, the ambitious transcript project goal of allowing school-to school-student record transfer across P-12 schools in New England as well as post-secondary institutions is one embraced by Vermont. Following the implementation of our statewide student solution, VT DOE will be able to capture transcript information and local schools will be able to share records with other schools and institutions of higher education as students transfer between schools as determined by the transcript project.

E10.   Student-level college readiness test scores: Vermont recently began purchasing SAT data from the College Board. As part of our partnership with NESSC, we will be creating and publishing multiple indicators of college readiness. Among these indicators will be participation and performance on the SAT and remedial course taking. In order to meet this commitment, we will continue to access SAT data and access data from the Vermont State Colleges on remedial courses. The University of Vermont does not offer remedial courses.
Identified Need: Vermont will access student-level data to assess college readiness including, but not limited to, SAT data and remedial course taking data. Other indicators of college preparedness will be developed in conjunction with a research advisory board. College readiness

data will be loaded into the EDW and college readiness reports at multiple levels will be created using these data. At the state level, these reports will allow policy makers to understand how well Vermont's high schools are preparing students for college. High school principals can use these indicators to understand how well their school competes with regard to college preparedness.

E11. Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework. Status: *Requirement Under Development***.** Along with the other states in NESSC, Vermont will collect and report multiple measures of transition to and success with postsecondary education. We will measure postsecondary matriculation by calculating a percentage of students who enroll in a postsecondary education institution. We will collect and report on remedial course taking and SAT performance. We will also calculate a postsecondary success rate (i.e., the percentage of students who graduate from college in a set period of time). In order to meet this goal, Vermont will have to access NSC data, remedial course data, and SAT data. In addition to the work with NESSC, Vermont is interested in other postsecondary information and will conduct a gap analysis based on "The Ideal State Postsecondary Data System, 15 Essential Characteristics and Required Functionality" (authored by State Higher Education Executive Officers) to identify other data of interest.
Identified Need: Vermont will access data to assess college success, including college enrollment, remedial course taking data and college completion. Other indicators of college success will be developed in conjunction with a research advisory board. In addition, we will obtain financial aid information to determine whether access to financial aid is contributing to Vermont student's persistence and success in college. These data will be loaded into the EDW, with college success reports created using these data.

E12. Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education. Status: *Requirement Under Development.* VT DOE is in the process of determining alignment between its Grade Level Expectations and the Common Core Standards for Career and College Readiness. In addition we are correlating state assessment scores with SAT scores. Should any other information be identified in the need to address alignment and adequate preparation for postsecondary success, VT DOE will make it available.

B. Project Outcomes related to System Requirements and Implementation

Vermont's Comprehensive LDS Development Strategies
Vermont has developed five broad strategies to expand and strengthen our current LDS. Through this integrated approach, Vermont will meet the requirements of the America COMPETES Act including this grant application, State Fiscal Stabilization Fund, and Race to the Top. We have specifically designed our strategies to produce outcomes that fill the gaps identified in the previous section. These five comprehensive objectives are described below and a system diagram is presented in Appendix A (Artifact 3). Following this, the specific outcomes for each of the required LDS capabilities and elements are listed (see also *Appendix C, Current Status of Longitudinal Data System*, for the outcomes in table form).

Strategy 1: Uniform Statewide Information System Toolset for all Vermont districts

Vermont will implement a uniform statewide student information toolset. This toolset will include a system that contains a standardized set of information on students, program participation, teachers, course taking, grades achieved, disciplinary actions, and achievement information, with both horizontal and vertical interoperability via a SIF data model. This toolset will improve the efficiency of many VT DOE and local school data processes. However, the primary goal is to integrate data linking teachers to students and transcript information without creating further data reporting burdens for local school districts. This approach will also improve the timeliness and accuracy of the data VT DOE uses for analysis and reporting. The comprehensive data will provide school administrators and teachers with valuable information to which most do not yet have access. Statewide professional development will be provided for school staff, including teachers, administrators, technical staff, and registrars to enable them to use and understand the relevance of the data and to promote data-driven decision making.

Strategy 2: State Level Operational Data Store
Vermont will implement a state level operational data store. This data store will receive real-time data from local information systems, enabling VT DOE to meet all reporting requirements and research goals without increasing the data reporting burden on local districts. The operational data store will incorporate relevant data validity checks to ensure data quality. The data store serves as the staging for quality data subsequently loaded into our Education Data Warehouse.

Strategy 3: Enhanced Education Data Warehouse (EDW)
Vermont's EDW contains PK-12 information related to students, enrollment, attendance, school finance, educators, discipline, and program participation. Implementing a statewide information toolset with vertical interoperability will allow us to expand the number of data objects to include pre-kindergarten assessments, postsecondary, workforce, and additional PK-12 information. Further, VT DOE will be able to increase the frequency of the data load cycle so that teachers and others can use the data housed in the warehouse to directly influence instruction of individual students. Included in the budget for this grant opportunity is report development. To increase accessibility to the information contained in the EDW, we intend to build reports from the EDW that support the work of teachers and school administrators. VT DOE is in an excellent position to rapidly design and created reports having just completed a data-driven reports system project. Furthermore, we will design reports aimed at other stakeholders, such as parents, business groups, and higher education providers, promoting public transparency about Vermont's educational system.

Strategy 4: Multi-State P-20 Research Agenda
Vermont and its NESSC partners have agreed to enter into a multi-state P-20 research partnership with research institutes (including University of Maine, the James M. Jeffords Center at the University of Vermont, and the Donahue Institute at the University of Massachusetts). The priorities of this research partnership will build upon existing work of NESSC to develop comparable metrics and benchmarks across the following five indicator areas: Graduation Rates; Drop-out Rates; College Enrollment; College Preparation; and College Success and is the first step in developing methods for exchanging student data across the region.

Beyond the work of the multi-state partnership, Vermont is developing a research advisory council to help define Vermont's research priorities and to identify researchers with whom the

VT DOE will facilitate the confidential sharing of education data to allow the research required to inform education policy and enhance achievement for Vermont's students.

<u>Project Outcomes for Capabilities and Elements</u>

C1.   Examine student progress and outcomes over time…include data at the individual student level from preschool through postsecondary education and into the workforce.
Outcome C1.1: Create and populate data warehouse objects including student-level prekindergarten assessment scores, SAT scores, Advanced Placement course taking, National Student Clearinghouse (college enrollment) information, and workforce data.

Outcome C1.2: Publish EDW driven reports to increase accessibility and analysis of the newly acquired data.

C2.   Facilitate and enable exchange of data among agencies and institutions within the State and between States so that data may be used to inform policy and practice… Support interoperability…to ensure linkage and connectivity among the various levels and types of data.
Outcome C2.1: Develop a comprehensive research/indicator development plan in collaboration with a multi-state research partnership (through NESSC). Research topics include college readiness, college success, early warning indicators, and program effectiveness indicators for students receiving services in the specified programs. The plan will include detailed documentation for how data will be exchanged between agencies and institutions, data element definitions, and indicator calculations and limitations. An explicit goal of the research group is the design and reporting of regionally-comparable education indicators to improve decision-making with regard to improving education and improve instructional and other services to students.

Outcome C2.2: Integrate data and indicators identified in the research plan into the existing EDW with role-appropriate access to relevant stakeholders in other agencies, institutions, and states. Point-and-click reports will be developed to make it easy for users to access this information.

C3.   Link student data with teachers, i.e…so that a given student may be matched with particular teachers primarily responsible for providing instruction in various subjects.
Outcome C3.1: Implement a statewide student information toolset for all Vermont school districts. The toolset will include a standardized data model with information on teachers, students, courses, grades earned, enrollment, demographic information, and program participation. The toolset will be SIF enabled to allow for both vertical and horizontal interoperability.

Outcome C3.2: Design and implement a state operational data store capable of receiving real-time information from local student information systems. The operational data store will include the information linking teachers to students.

Outcome C3.3: VT DOE is planning an upgrade of the EDW, to be completed using state funds. This upgrade will provide a foundation for the new dashboard feature not possible with our current EDW. This dashboard includes district level performance with student drill down capabilities. The dashboard will allow educators to readily see student-level longitudinal achievement information. Implementing the dashboard will be funded under this grant.

C4. The system must enable the matching of teachers with information about their certification and teacher preparation programs, including the institutions at which teachers received their training
Vermont has the ability to match teachers with information about their preparation programs. We are in the process of expanding that capability and research in that area, funded by Vermont, and there are no anticipated outcomes related to this grant opportunity.

C5. Enable data to be easily generated for continuous improvement and decision-making, including timely reporting to parents, teachers, and school leaders on the achievement of their students.
Outcome C5.1: Automate data transfer from local school districts to state operational data store to EDW and EDW reports to substantially improve the timeliness of the data available to education stakeholders.

Outcome C5.2: Implement a statewide student information toolset which includes an important feature of a portal allowing connections between parents, students, and teachers.

C6. Ensure the quality and integrity of data contained in the system.
Outcome C6.1: Implement multiple-level data audits and validity checks utilizing a SIF agent. Local data systems will have business rules preventing the entry and transfer of invalid data. The state operational data store will have an expanded set of business rules including those that can only take place when data from all districts are available (e.g., reporting one student enrolled in two schools).

Outcome C6.2: Implement a professional development plan to ensure that school staff members are skilled in using the statewide student information toolset and appreciate its value in improving instruction and student educational outcomes.

C7. Provide the State with the ability to meet reporting requirements of the Department, especially reporting progress on the metrics established for the State Fiscal Stabilization Fund and the reporting requirements included in *EDFacts*.
Outcome C7.1: Improve timeliness of data stored in EDW to allow *EDFacts* coordinator to access required data from the EDW rather than silo systems.

Outcome C7.2: Create EDW driven reports that meet the public reporting requirements of the State Fiscal Stabilization Fund.

E1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system (except as allowed by Federal and State law).
This work is completed. There are no expected outcomes related to this element.

E2.   Student-level enrollment, demographic, and program participation information.
Outcome E2.1: Integrate student-level postsecondary information into the EDW.

Outcome E2.2: Add postsecondary enrollment indicators to existing EDW reports.

E3.   Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs.
Outcome E3.1: EDW expansion includes the creation and population of a data object for National Student Clearinghouse (college enrollment) data.

E4.   The capacity to communicate with higher education data systems.
Outcome E4.1: Develop post-secondary indicators through ongoing collaboration with research partners. The development of these indicators will allow VT DOE to assess the effectiveness of Vermont high schools in preparing students for post-secondary efforts.

Outcome E4.2: Expand EDW data model and EDW reports to provide role appropriate access to post-secondary data.

E5.   A State data audit system assessing data quality, validity, and reliability.
Outcome E.5.1: Expand system of data audits and validity checks utilizing a SIF agent as appropriate for the statewide student information system and state operational data store. This new data system will contain data that has not previously been collected at the state level and must contain checks to ensure these edits.

E6.   Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965.
VT DOE currently has yearly test records. No outcomes are planned related to this data element.

E7.   Information on students not tested, by grade and subject:
VT DOE currently has information on students not tested by grade and subject. No outcomes are planned related to this data element.

E8.   A teacher identifier system with the ability to match teachers to students:
Outcome E8.1: Implement a statewide student information toolset with SIF compliant vertical reporting to the state data operational store that will provide teacher information linked to students and courses.

Outcome E8.2: Published reports including the EDW dashboard feature, with role-appropriate access, of student performance information by teacher generated from the EDW following the incorporation of the linked student-teacher information into the EDW data model.

E9.   Student-level transcript information, including information on courses completed and grades earned
Outcome E9.1: Implement the statewide student information toolset and state data store to provide automated transfer of transcript information, including courses completed and grades earned, from districts to the state, between districts and to institutions of higher education.

E10.   Student-level college readiness test scores.
Outcome E10.1: Create student level college readiness reports including SAT test scores and other indicators of college readiness as determined by VT DOE research partners.

Outcome E10.2: Integrate SAT test scores into the EDW.

E11.   Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework.
Outcome E11.1: Integrate data including National Student Clearinghouse, remedial course taking information from Vermont State Colleges, and financial aid data into the EDW to allow research on college success.

Outcome E11.2: Create high school and state level reports with indicators of postsecondary success, such as the percentage of graduates enrolled in college, the percentage of students enrolled in remedial courses, and the percentage of graduates successfully completing two and four year college programs.

E12. Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education.
Outcome E12.1: Identification of other information necessary to address alignment through VT DOE research partners.

C. Timeline for Project Outcomes

Key for Responsible Party Column (See *D. Project Management and Governance* and *E. Staffing for more information*.)
EDW Team - Refers to the project team implementing the Enhanced Education Data Warehouse. The reports contractor and TetraData are part of the team.
ODS & SIS Team - Refers to the team charged with designing and implementing the State Operational Data Store and Uniform Information System Toolset. The contractors for these systems are part of the team.
Reports Contractor - Refers to the contractor who will develop advanced "point and click" reports for the EDW.
TetraData - Contractor for the education data warehouse.
V-DEP Team - is the lead implementation team for the Vermont Data Enhancement Project.
V-RAC - is the Vermont Research Advisory Council.
VDC – Vermont Data Consortium
Note: The Vermont Department of Education wants to ensure the success of this and other proposed ARRA competitive grant projects. To ensure the foundations for this success are in place, we are completing some very important tasks, such as identification of business requirements, enterprise data architecture development and alignment to SIF prior the grant award. This work will ensure that we will have navigated through a significant portion of the procurement process by the time the grant award is issued. Details on the scope and the timeline for these foundation activities are in Artifact 1 of Appendix A.

Task/Milestone	Responsible Party	Start/End
Outcome C1.1: Expanded EDW data including PK Assessment, SAT, AP, National Student Clearinghouse (NSC), and workforce data. **Outcome C1.2:** Expanded EDW reports to increase longitudinal analysis of these data.		
a. Secure SAT and NSC Data	EDW Team	6/10-7/10
b. Design and Build SAT and NSC Data Objects	TetraData	6/10-9/10
c. Secure PK Assessment and Workforce Data	EDW Team	6/11-7/11
d. Design and Build PK and Workforce Data Objects	TetraData	6/11-9/11
e. Secure AP Data	EDW Team	1/13-3/13
f. Design and Build AP Data Objects	TetraData	3/10-5/13
Outcome C2.1: A research /indicator development plan with the assistance of research partners to develop readiness, predictive, early warning and program effectiveness indicators for students receiving services from other agencies.		
a. Form Vermont Research Advisory Council (VRAC)	Commissioner	8/10
b. Hold first VRAC meeting. Discuss charter, and VT DOE's research priorities and other items for research agenda consideration	VRAC & V-DEP Team	7/10

c. Finalize Year 1 Research Agenda and Present to Commissioner for Final Approval	VRAC & V-DEP Team	8/10-10/10
d. Finalize project plan with resources (internal DOE or External Research Partners) to complete Year 1 Research Agenda	VRAC & V-DEP Team	11/10-1/11
e. Recommend New Indicators for Addition to EDW	VRAC	8/10-9/11
f. Repeat for Year 2 & Year 3		
Outcome C2.2 Expanded of EDW data model and reports to include information identified in by VT Research Advisory Council.		
a. Identify and Secure Data Source	EDW Team	8/10-9/11
b. Design and Build Data Object	TetraData	8/10-9/11
c. Design and Develop Reports	Reports Contractor, EDW Team	8/10-9/11
d. Develop script to automate load into report tables.	Reports Contractor	8/10-9/11
Outcome C3.1: Implement a standard data model and statewide student information system will allow mandatory SIF vertical reporting providing real-time data linking students and teachers at state level. **Outcome C5.2:** Implement a statewide portal as part of the student information system where parents, students, and educators have role appropriate access to student information.		
a. Implement contract with contractor team to oversee all work related to this grant award.	IT Director	6/10
b. Review business requirements and draft RFPs for Uniform Student Information Toolset including SIF infrastructure	V-DEP Team	6/10-7/10
c. Evaluate, select and contractor(s) and implement contract	Selection Team	7/10-10/10
d. Review business requirements and identify horizontal integration requirements	ODS & SIS Team, V-DEP Team	11/10 – 11/10
e. Uniform Student Information Toolset and SIF integration specifications are finalized	ODS & SIS Team, V-DEP Team	12/10 – 2/11
f. First Toolset is implemented	ODS & SIS Team, V-DEP Team	2/11-4/11
g. Test Toolset including horizontal SIF implementation between toolset components.	ODS & SIS Team, V-DEP Team	4/11-6/11
h. Test vertical SIF integration of Uniform Student Information Toolset with state operational data store	ODS & SIS Team, V-DEP Team	4/11 – 6/11
i. Train Districts (Repeat until complete.)	SIS Contractor and VDC	7/11-5/13
j. Roll out to Districts (Repeat until complete.)	SIS Contractor and VDC	7/11 – 5/13
Outcome C3.2 Implement a statewide operational data store that includes linked student and teacher information.		

a. Review business requirements and draft RFPs for State Operational Data Store	V-DEP Team	6/10-7/10
b. Evaluate, select and contract contractor	Selection Team, V-DEP Team	7/10-9/10
c. State Operational Data Store Data Model is Finalized	V-DEP Team, ODS & SIS Team	12/10-2/11
d. Data audit and data validity checks are identified.	ODS & SIS Team,V-DEP Team	12/10-2/11
e. State Operational Data Store with data audit and validity checks is implemented.	ODS & SIS Team, V-DEP Team	2/11-4/11
f. Use test data to confirm functionality of data validity checks.	ODS & SIS Team,V-DEP Team	4/11 – 6/11
g. Test vertical SIF integration of Uniform Student Information Toolset with state operational data store	ODS & SIS Team, V-DEP Team, VDC	4/11 – 6/11
h. Train Staff (State and District)	ODS Contractor and VDC	7/12 – 5/13
Outcome C3.3: Expanded EDW data model to include the link between students and teachers and reports to facilitate data use and accessibility. **Outcome C5.1:** Increased frequency of EDW data loads, improved timeliness of information as allowed by vertical interoperability achieved with the SIF agent.		
a. Design Data Object. *****	EDW Team	7/09-5/13
b. Create automatic data load scripts to load the data into the EDW.	TetraData	7/09-5/13
c. Design Reports and automate data load into reporting tables.	Report Contractor	7/09-5/13
d. Implement dashboard	TetraData	8/10-4/11
Outcome C6.1: Expanded of the system of data audits and validity checks as appropriate for the SIF enabled statewide system and state operational data store. (Strategy 1)		
i. Review business requirements and draft RFPs for State Operational Data Store	V-DEP Team	6/10-7/10
j. Evaluate, select and contract contractor	Selection Team, V-DEP Team	7/10-9/10
k. State Operational Data Store Data Model is Finalized	ODS & SIS Team	12/10-2/11
l. Data audit and data validity checks are identified.	ODS & SIS Team, V-DEP Teams	12/10-2/11
m. State Operational Data Store with data audit and validity checks is implemented.	ODS & SIS Team, V-DEP Teams	2/11-4/11
n. Use test data to confirm functionality of data validity checks.	ODS & SIS Team, V-DEP Teams	4/11 – 6/11
o. Test vertical SIF integration of Uniform Student Information Toolset with state operational data store	ODS & SIS Team, V-DEP Teams	4/11 – 6/11
p. Train Staff (State and District)	ODS Contractor(s), VDC	7/12 – 5/13

Outcome C6.2: Implement a professional development plan to ensure that local staff members are able to use information toolset for both operations and data driven decision making.		
a. Develop change management strategy and communication plan which communicates purpose of the information collected via the toolset and how it informs administrative processes and informs instruction.	Change Management Specialist (V-DEP Team)	6/10 – 5/11
b. Communicate this message in trainings, meetings and newsletters to district staff.	All Project Teams, VDC	6/10-5/13
c. Utilize VT Research Advisory Councils recommendations for using research to inform instruction when developing trainings for EDW and SIS	VDC	6/9-5/13
To meet metrics established for the State Fiscal Stabilization Fund and the reporting requirements included in *EDFacts* **Outcome C7.1:** Increased frequency of EDW data load to allow for automation of EDFacts reporting. **Outcome C7.2**: Expanded EDW data model to include metrics for State Fiscal Stabilization Fund requirements.		
a. Identify and Secure Data Source *	EDW Team	7/09-5/13
b. Design and Build Data Object	TetraData	7/09-5/13
c. Automate the EDW data loads from the State Operational Data Store or external sources if applicable.	TetraData	7/09-5/13
Outcome E2.1: Integrate student-level postsecondary information into the EDW. **Outcome E2.2:** Add postsecondary enrollment indicators to existing EDW reports.		
a. Identify and Secure Data Source	EDW Team	8/10-10/10
b. Design and Build Data Object	TetraData	11/10
c. Develop New Data Reports	Reports Contractor	12/10
d. Create scripts to automate data load into report tables	Reports Contractor	12/10
Outcome E3.1: EDW expansion includes the creation and population of a data object for National Student Clearinghouse (college enrollment) data.		
a. Secure NSC Data	EDW Team	6/10
b. Design and Build Data Object	TetraData	8/10
c. Design and Develop Reports for Post Secondary Participation	EDW Team	8/10
Outcome E4.1: Post-secondary indicators through ongoing collaboration with VT Research Advisory Council.		
a. Form Vermont Research Advisory Council (VRAC)	Commissioner	8/10
b. Hold first VRAC meeting. Discuss charter, and VT DOE's research priorities and other items for research agenda consideration	VRAC & V-DEP Team	7/10
c. Finalize Year 1 Research Agenda and Present to Commissioner for Final Approval	VRAC & V-DEP Team	8/10-10/10

d. Finalize project plan with resources (internal DOE or External Research Partners) to complete Year 1 Research Agenda	VRAC & V-DEP Team	11/10-1/11
e. Recommend New Indicators for Addition to EDW	VRAC	6/11-9/11
Outcome E4.2: Expanded EDW data model and EDW reports to provide role appropriate access to post-secondary data.		
a. Identify and Secure Data Source	EDW Team	8/10-10/10
b. Design and Build Data Object	TetraData	11/10
c. Develop New Data Reports	Reports Contractor	12/10
d. Create scripts to automate data load into report tables	Reports Contractor	12/10
To increase capacity to communicate with higher education data systems: **Outcome E.5.1:** Expanded system of data audits and validity checks as appropriate for the SIF-enabled statewide system and state operational data store.		
a. Ensure identification of business requirements for Uniform Statewide Information System Toolkit includes identification of data audit and validity checks.	V-DEP Team, Contractor, VDC	2/11-4/11
b. During testing of Toolkit, use test deck to ensure data audit and validity checks are functioning correctly.	V-DEP Team, Contractor, VDC	4/11-6/11
To create a teacher identifier system with the ability to match teachers to students: **Outcome E8.1:** Standard data model and statewide student information system will allow mandatory SIF vertical reporting providing real-time data linking students and teachers at state level.		
a. Implement contract with contractor team to oversee all work related to this grant award.	IT Director	6/10
b. Review business requirements and draft RFPs for Uniform Student Information Toolset including SIF infrastructure	V-DEP Team	6/10-7/10
c. Evaluate, select and contractor(s) and implement contract	Selection Team	7/10-10/10
d. Review business requirements and identify horizontal integration requirements	ODS & SIS Team, V-DEP Team	11/10 – 11/10
e. Uniform Student Information Toolset and SIF integration specifications are finalized	ODS & SIS Team, V-DEP Team	12/10 – 2/11
f. First Toolset is implemented	ODS & SIS Team, V-DEP Team	2/11 – 4/11
g. Test Toolset including horizontal SIF implementation between toolset components.	ODS & SIS Team, V-DEP Team	4/11 – 6/11
h. Test vertical SIF integration of Uniform Student Information Toolset with state operational data store	ODS & SIS Team, V-DEP Team	4/11 – 6/11

i. Train Districts	SIS Contractor(s), VDC	7/11 – 5/13
j. Roll out to Districts	SIS Contractor(s), VDC	7/11 – 5/13
k. Review business requirements and draft RFPs for State Operational Data Store	V-DEP Team	6/10-7/10
l. Evaluate, select and contract contractor	Selection Team, V-DEP Team, ODS & SIS Team	7/10-10/10
m. State Operational Data Store Data Model is Finalized	V-DEP Team, ODS & SIS Team	12/10-2/11
n. Data audit and data validity checks are identified.	V-DEP Team, ODS & SIS Team	12/10-2/11
o. State Operational Data Store with data audit and validity checks is implemented.	V-DEP Team, ODS & SIS Team	2/11-4/11
p. Use test data to confirm functionality of data validity checks.	V-DEP Team, ODS & SIS Team	4/11 – 6/11
q. Test vertical SIF integration of Uniform Student Information Toolset with state operational data store	V-DEP Team, ODS & SIS Team	4/11 – 6/11
r. Train Staff (State and District)	ODS Contractor(s), VDC	7/11 – 5/13
To create a teacher identifier system with the ability to match teachers to students: **Outcome E8.2:** Expansion of EDW data model and reports to facilitate data use and accessibility.		
a. Identify and Secure Data Source *	EDW Team	5/11-6/11
b. Design and Build Data Object	TetraData	6/11-7/11
c. Develop New Data Reports	Reports Contractor	7/11-8/11
d. Create scripts to automate data load into report tables	Reports Contractor	8/11-9/11
Outcome E9.1: Automated transfer of student transcript information from local districts to state district to district, and district to institutions of higher education.		
a. Ensure the state operational data store and uniform statewide information system toolset is configured to transfer transcript information between districts and institutions of higher education.	V-DEP Team, ODS & SIS Team	12/10 – 2/11
Outcome E10.1: Adoption of a research agenda that includes measuring the college preparedness for Vermont students.		
a. Ensure that college preparedness is a priority on VT Research Advisory Council's Year 1 Research Agenda.	VRAC & V-DEP Team	8/10 – 10/10
b. College Preparedness Indicators are identified.	VRAC & V-DEP Team	8/10 –10/10
c. Indicator specifications are provided	VRAC & V-DEP Team	8/10 –10/10
Outcome E10.2: Expansion of the EDW data model and EDW reports to include college readiness test scores.		
a. Identify and Secure Data Source	EDW Team, VRAC	8/10 –10/10
b. Design and Build Data Object	TetraData	11/10

c. Develop New Data Reports	Reports Contractor	12/10
d. Create scripts to automate data load into report tables	Reports Contractor	12/10
Outcome E11.1: Collection of post-secondary data including student-level financial aid and remedial course taking.		
a. Via the Vermont Research Advisory Council, work with Vermont State Colleges and Vermont Student Assistance Corp to secure student level financial aid indicators.	VRAC, V-DEP Team, EDW Team	8/10 – 10/10
Outcome E11.2: Expansion of EDW data objects and EDW reports to include indicators of post-secondary success.		
b. Identify and Secure Data Source	EDW Team, VRAC	8/10 –10/10
c. Design and Build Data Object	TetraData	11/10
d. Develop New Data Reports	Reports Contractor	12/10
e. Create scripts to automate data load into report tables	Reports Contractor	12/10
Outcome E12.1: Identification of other information necessary to address alignment through VT DOE research partners.		
a. Development of indicators for alignment to research advisory council agenda.	VRAC	09/11

1. The State Operational Data Store will not be fully populated until all Vermont districts have implemented the Uniform Statewide Information System Toolset. The final timeline for the implementation cannot be known until contracts have been signed. The VT Department of Education is prepared to do an interim data collection to ensure we have the student teacher link in time to meet State Fiscal Stabilization Fund deadlines of Sept 2011 if required.